

REMARKS

Applicant respectfully requests the Examiner to reconsider the present application in view of the foregoing amendments to the claims.

Status of the Claims

In the present Reply, claims 1-10 have been amended, and claim 11 has been added. Claims 3 and 9 are objected to but allowable if properly rewritten and if the rejection under 35 U.S.C. § 112, second paragraph, is overcome (see paragraph 6 of the Office Action). Thus, claims 1-11 are pending in the present application.

No new matter has been added by way of these amendments and new claim, because each amendment and new claim is supported by the present specification and/or is editorial in nature. For example, the amendment to claim 1 has support throughout the present specification and is editorial in nature. Further, the amendments to claims 2-4 and 6-10 are, as one of skill in the art would understand, obviously minor in character (e.g., replacing “characterised in that” with “wherein”). Also, the amendment to claim 5 corrects a typographical error. Thus, these amendments are clarifying and are not narrowing in scope. By amending these terms in order to clarify the claimed invention (e.g., grammatical changes; correction of misspelling), Applicant is in no way conceding any limitations with respect to the interpretation of the claims under the Doctrine of Equivalents. New claim 11 drawn to a preferred embodiment of the present

invention has been added for consideration. Claim 11 reflects the subject matter canceled from claim 2 (“vice versa” is deleted in claim 2). Thus, no new matter has been added.

Based upon the above considerations, entry of the present amendment is respectfully requested.

In view of the following remarks, Applicant respectfully requests that the Examiner withdraw the objection and all rejections and allow the currently pending claims. Applicant notes that any previous arguments/remarks are rendered moot in view of the new rejections (see paragraph 7 of the Office Action). Regarding paragraph 7 of the Office Action, Applicant respectfully refers the Examiner to the scope of the claims as presented herein, wherein phrases such as “measuring” in place of “is measured” are used.

Paragraph 1 (Page 2) of the Office Action

Applicant respectfully traverses the reopening of prosecution. First, it is not clear as to why a new reference (Tondre et al.) is cited when the search was not based on newly claimed features (the claims were not amended) instituted by Applicant. Second, the Examiner should have conducted a thorough search for all claimed features in any of the previous Office Actions, wherein Applicant respectfully submits that the Examiner is not advancing prosecution and is conducting improper “piecemeal examination.” *See* M.P.E.P. § 707.07(g); § 707.07(a).

Thus, it is respectfully requested that the present application either be allowed based on the amendments and remarks herein, or, if there are remaining issues to resolve, that an Interview

be conducted in the near future (before issuance of the next Office Action) with Applicant's representative in efforts to advance prosecution. Applicant's representative contact information is given at the end of this Reply.

Claim Objection (Paragraph 2 of the Office Action)

Claim 5 stands objected to due to a misspelling or informality. This misspelling has been corrected, and thus withdrawal of this objection is respectfully requested.

Issues under 35 U.S.C. § 112, Second Paragraph (Paragraph 3 of the Office Action)

Claims 1-10 stand rejected under 35 U.S.C. § 112, second paragraph, for reasons of indefiniteness. Applicant respectfully traverses, and reconsideration and withdrawal of this rejection are respectfully requested.

With regard to claim 1, the word "the" has been replaced with "a" with respect to the recited temperature range. Withdrawal of this rejection is requested due to this clarification.

With regard to claim 2, the term "vice versa" is deleted, rendering this rejection moot. However, Applicant submits that new claim 11 now covers this embodiment.

With regard to claim 4, Applicant respectfully submits that this claim properly depends on claim 1 (claim 1 refers to a computer in step 5)).

With regard to claim 7, Applicant agrees with the Examiner's interpretation of element ii).

With regard to claim 8, this embodiment of the present invention refers to the equipment for the control of the temperature of the fluid of claim 7. Thus, claim 8 properly depends on claim 7.

With regard to claim 9, Applicant submits that independent claim 7 recites the existence of a dosage organ for the addition of a liquid to the measuring cell. Dependent claim 9 has one organ for the withdrawal (not addition) of a liquid, wherein this organ is of course in addition to the organ defined in claim 7. Applicant adds that it is possible to have an additional organ(s) for adding a liquid for the invention of claim 7.

Accordingly, Applicant respectfully submits that the pending claims recite clear and definite claim language and fully comply with the provisions of 35 U.S.C. § 112, second paragraph. Therefore, reconsideration and withdrawal of this rejection are respectfully requested.

Issues under 35 U.S.C. § 103(a) (Paragraphs 4-5 of the Office Action)

Claims 1, 3, 4, 5, 8 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tondre et al. (*J. Dispersion Science and Technology*, Vol. 7(5), pp. 581-597 (1986); newly cited and applied) in view of Rouse (*JAOCs*, Vol. 71, No. 1, pp. 37-42 (1995)). Applicant respectfully traverses, and reconsideration and withdrawal of this rejection are respectfully requested.

Deficiencies of the Primary Reference

Tondre et al. are concerned with the study of a ternary system formulated with nonionic surfactants. The ambition in the cited reference is to design a set-up to facilitate the findings of isotropic microemulsion phases. In the set up, an **analogous** diagram of temperature and the turbidity are recorded (see Figure 3 on page 586). These curves are then manually evaluated and the turbidity values indicating the upper and lower borders for clear solutions are then manually transferred to two-dimensional diagrams, such as those shown Figures 3 bis (on page 587) and Figure 1 (a), (b) and (c) (page 584).

Thus, Tondre et al. fails to disclose three-dimensional diagrams of the kind defined in the present invention. Further, Tondre et al. fails to disclose or teach the automatic collection of numerical data for use in the presentation of three-dimensional diagrams. Such deficiencies are further not accounted for in the secondary reference of Rouse or in paragraph 5 of the Office action.

Combining Tondre and Rouse still does not what is claimed

As mentioned in Applicant's Supplemental Appeal Brief of March 3, 2005, Rouse fails to disclose many features of the claimed invention as shown in the chart on pages 69-70 (e.g. fails to disclose the claimed numerical measurement of property as a function of concentration and temperature). Thus, Rouse fails to account for the deficiencies of Tondre.

In this regard, U.S. case law squarely holds that a proper obviousness inquiry requires consideration of three factors: (1) the prior art reference (or references when combined) must teach or suggest all the claim limitations; (2) whether or not the prior art would have taught, motivated, or suggested to those of ordinary skill in the art that they should make the claimed invention (or practice the invention in case of a claimed method or process); and (3) whether the prior art establishes that in making the claimed invention (or practicing the invention in case of a claimed method or process), there would have been a reasonable expectation of success. *See In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991); *see also In re Kotzab*, 55 USPQ2d 1313, 1316-17 (Fed. Cir. 2000); *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988). Here, not even the initial requirement of disclosure of all claimed features has been satisfied. For instance, even when combined, the cited combination of Tondre and Rouse fails to disclose the creation of three-dimensional diagrams of the kind as instantly claimed in the present invention. Thus, a *prima facie* case of obviousness is not established and Applicant respectfully requests withdrawal of this rejection in view of Tondre and Rouse.

Lack of Motivation and/or Reasonable Expectation of Success; Hindsight Reconstruction

In the current Office Action, the Examiner states that Tondre lacks disclosure of “a central computer to control the parts and the data is not displayed in a three dimensional diagram” (see page 4, lines 9-11). Rouse is then cited to account for such deficiencies in the primary reference. In response, Applicants respectfully submit that one of skill in the art would

not be motivated and/or reasonably expect to be successful in combining Tondre with Rouse in order to achieve the present invention.

Applicant submits that in contrast to Tondre et al. (and Rouse), the present invention is concerned with the use of modern computer technology to sample data for as many temperatures and concentrations as may be useful for the desired investigation, and to present the collected data as a three-dimensional diagram. By employing the method used in the invention of data sampling and presentation, the diagram can be generating without the anticipatory choice of a zero level, for example, which level of the dependent parameter actually represents the boundary between an isotropic phase and a non-isotropic phase. The three-dimensional diagrams produced by the presently claimed invention unexpectedly contain essentially more information and give clearer overviews than the diagrams produced by Tondre et al., even when (improperly) combined with Rouse. In this regard, Applicant respectfully refers the Examiner to Figure 2 of the present invention. The present invention also unexpectedly makes it very easy to simultaneously measure several dependent parameters, which may also offer additional potentials to interpret observed trends in the dependent parameters in terms of physical phenomena.

Overall, neither Tondre nor Rouse discloses, recognizes, suggests or relates to the creation of any three-dimensional diagrams of the kind as instantly claimed in the present invention. This is a major deficiency of both references. Though the Office Action refers to the

diagrams in Rouse, Applicants submit that referring to such diagrams as well as the combining Rouse with Tondre are improper.

With regard to Rouse, all diagrams in the reference merely show concentrations as variables with an arbitrarily chosen critical transmittance value (Applicant has previously discussed various essential differences between the present invention and the cited Rouse reference as outlined in the mentioned Supplemental Appeal Brief (e.g., see pages 69-70, 72-76)). This is different from the present invention since the measurements in Rouse are all made at a fixed temperature, which means that temperature is not a considered variable. Applicant further submits that the diagrams in Rouse are not produced by a computer, but are instead plotted manually. Thus, Applicant submits that combining Tondre with Rouse still does not achieve the present invention.

Accordingly, one of skill in the art would not be motivated nor reasonably expect to be successful in achieving the present invention based on the disclosure in Rouse and Tondre et al. since neither of the cited references discloses or recognizes the electronic storage of the measuring points and the coordination and visualization of the electronically stored measuring points in a three-dimensional diagram with temperature and concentration as independent variables. Applicant notes that the rejection in the Office Action does not mention such claimed independent variables in conjunction with the three-dimensional diagrams as instantly claimed. Therefore, the present invention has both novelty and inventive merit over Tondre et al. and Rouse, whether in combination or not.

Applicant also respectfully submits that one of skill in the art would not be motivated and/or reasonably expect to be successful in achieving the present invention in using the disclosures of Tondre and Rouse since there are a number of other essential differences between Rouse and Tondre et al.

First, Rouse relates to a titration process, where microemulsion (clear solution) is titrated with an oil until the microemulsion turns cloudy. The sample is then dosed with a cosurfactant in a quantity of **more than enough** to clear the sample. The sample is again titrated with oil, and this procedure continues until the sample no longer clears up when adding the cosurfactant. Thus, the addition of oil and cosurfactant is unpredictable. The values obtained are based on the concentration of the surfactant in the original sample. But in order to obtain new values, new samples with another concentration of the surfactant have to be prepared and the whole process for collecting data has to be repeated. Each sample is provided with an individual set up and operating instructions. Furthermore, the different samples are handled by a sample change unit with up to 16 samples and a sample lift station. From the above, it is evident that both the method and the equipment (titration with both alternating oil and a cosurfactant, the sampling, and the measurements performed at a fixed temperature) disclosed by the secondary Rouse reference essentially differ from the method and equipment of the primary Tondre reference. Thus, Applicant respectfully disagrees with the conclusions drawn at page 5, lines 1-7 of the Office Action. Any cited reference like Rouse used for a rejection under 35 U.S.C. § 103(a) must be considered in its entirety, *i.e.*, as a whole, including those portions that would lead away from

a claimed invention. *See W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). In other words, the Rouse reference must be read in its entirety, including the teachings of the titration with both alternating oil and a cosurfactant, the sampling, and the measurements performed at a fixed temperature. Instead, the Office Action appears to select only portions of Rouse in order to support the conclusions drawn on page 5, lines 1-7 of the Office Action. Applicants traverse the combination of Tondre with Rouse because one of skill in the art would read the entire disclosure of each cited reference, and would not achieve the present invention.

Further, it is clear that Tondre et al. are well aware of the possibility to use titration techniques but make the remark on page 582 that a simple titration performed at a fixed temperature (such as the one disclosed in Rouse) is inferior to the procedure used by Tondre et al. Thus, under *W.L. Gore*, the Tondre reference must also be read in its entirety, including the teaching away that using a simple titration performed at a fixed temperature (such as the one disclosed in Rouse) would be have disadvantages or should be avoided. Applicant further submits that a person skill in this art would not have combined the teachings of the two references since they have no common essential features (as further evidenced by an entire reading of each reference). Even if the skilled artisan would have tried to combine the references, the result could not have been the object of the present invention as claimed for the above reasons.

Applicant adds that it is not a matter of using the computer of Rouse to store the data of Tondre and thus produce three-dimensional diagrams as asserted (see the Office Action at page 5, lines 1-5). This part of the Office Action is essentially too broad and dangerous simplification of the present invention. Most inventions are after their presentation easy to understand as well as the benefit of the invention. Therefore, it is normally easy to search in the literature for pieces of information and to put them together in a manner not suggested and to overlook under which circumstances the pieces of information were disclosed. It is not sufficient to be able to show that certain pieces of information could have been combined by a person skilled in the art. Instead, the showing of combining references “must be clear and particular”. *See In re Dembicza*k, 175 F.3d 994, 998, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). Also, even circumstances that speak against a combination have to be considered (e.g., see the last sentence on page 582 of Tondre et al. that discusses disadvantageous fixed temperature methods). The question is if a person skilled in the art (a person with no capacity to make patentable inventions) and with no knowledge of the actual invention would have found it obvious, guided by the disclosure in the references (if the references are properly referred to in the first place), to combine them in such a manner that all the necessary characteristics of the invention were revealed. If the references do not disclose all the necessary characteristics then no proper combination can be made. Thus, the conclusion at page 5 of the Office Action does not take into account the key differences between the two references, including how Rouse does not even have temperature as a variable and manually

plotting the diagrams, or the teaching away in Tondre regarding the use of a fixed temperature method.

In this regard, Applicant adds that: “It is wrong to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit.” *Orthopedic Equip. Co., Inc. et al. v. United States*, 217 USPQ 193, 199 (Fed. Cir. 1983). In this respect, Applicant is aware some hindsight is permissible, but respectfully submits that an impermissible level of hindsight reconstruction has been used to form the instant rejection.

Applicant adds that while the reference need not expressly teach that the disclosure contained therein should be combined with another, *see Motorola, Inc. v. Interdigital Tech. Corp.*, 43 USPQ2d 1481, 1489 (Fed. Cir. 1997), the showing of combining references “must be clear and particular”. *See In re Dembicza*k. Here, there is no guidance in any of the two cited references to achieve the formulations as presently claimed, especially in consideration of the differences between the methods and apparatuses of the references as discussed above.

From the above, it is evident that the present invention as claimed also exhibits an inventive step over Tondre et al. in view of Rouse. Withdrawal of this rejection is respectfully requested.

Rouse is also inconsistent with the present invention, wherein the requisite motivation is lacking for this addition reason. Specifically, the newly cited Rouse reference does not disclose or recognize any three-dimensional system of the present invention’s kind (the diagrams in

Rouse are not produced by a computer, but are instead plotted manually). Further, according to the present invention, all preparation of samples are made directly in the measuring cell in a predetermined manner by a computerized control program for the concentration without the need of a sample change unit. However, a sample lift station and producing new starting samples are required in Rouse. Thus, the skilled artisan would recognize that the present invention is significantly different in aim, method and equipment used for the present invention versus that in Rouse. Accordingly, despite the assertions in paragraphs 5 and 7 of the Office Action, Rouse is inconsistent with the present invention, and such inconsistencies have not been accounted for in the outstanding Office Action. Instead, the Examiner cites only parts of Rouse without the proper reading of the entire disclosure of the reference in determining of the scope and content of the prior art. *See Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966).

Applicant also traverses the application of *In re Venner*, 120 USPQ 192 (CCPA 1958), which appears at the end of paragraph 5 in the Office Action. The factual situation in *Venner* is not only significantly different from the present circumstances, the Examiner has not shown sufficient reasons as to why automation could be applied to the technology of the present invention. *Venner* refers to “broadly” providing an automatic or mechanical means in replacing manual activity. However, the Examiner has not even accounted for any manual activity of all claimed features in the instant rejection. In other words, the Examiner has not identified the manual activity to be replaced. Applicant also notes that the diagrams in Rouse are not produced by a computer, but are instead plotted manually. Further, the Examiner has not established that

the present invention has “broadly” provided a mechanical or automatic means of replacing some manual activity. Additionally, there is no evidence presented by the Examiner to show that the process of the present invention produces the same result as the manual means. If anything, the results are not the same. Thus, the present invention (e.g., claim 1) describes a unique combination of steps and features that are not disclosed or taught in the cited combination of Tondre and Rouse, and (inappropriately) applying *Venner* does not take away from such a unique combination. Thus, the Examiner has incorrectly applied the *Venner* case because the facts are different, the holding does not apply to the instant present invention and corresponding technology, there is no showing of a broad automatic means is being made, and no evidence has been provided that the results are the same. The *Venner* case has been inappropriately cited and applied in the instant rejection.

Inoperability; Destroying Intended Function of the Reference

Finally, Applicant respectfully submits that one of skill in the art would not have the requisite motivation to produce the instant invention since the asserted combination (of Tondre and Rouse) would produce an inoperable device and/or destroy the intended function of either one of the cited references. *In re Vaeck*. As mentioned, the present invention makes it unexpectedly easy for one of skill in the art to simultaneously measure several dependent parameters, which may also offer additional potentials to interpret observed trends in the dependent parameters in terms of physical phenomena. The invention also claims computer

technology that samples data for as many temperatures and concentrations as may be useful for the desired investigation, and to present the collected data as a three-dimensional diagram.

Regarding the claimed invention versus the cited combination of Tondre and Rouse, it is not clear how one of skill in the art could even make the present invention based on the disclosure in these references. As the Federal Circuit has held: “If references taken in combination would produce a ‘seemingly inoperative device,’ we have held that such references teach away from the combination and thus cannot serve as predicates for a *prima facie* case of obviousness.” *See McGinley v. Franklin Sports Inc.*, 60 USPQ2d 1001, 1010 (CAFC 2001) (citing *In re Sponnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (CCPA 1969) (references teach away from combination if combination produces seemingly inoperative device) and *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (inoperable modification teaches away)). In this regard, the skilled artisan would have to:

- improperly delete or modify the Tondre et al. curves that are manually evaluated, wherein the turbidity values indicating the upper and lower borders for clear solutions are then manually transferred to two-dimensional diagrams, such as those shown Figures 3 bis (on page 587) and Figure 1 (a), (b) and (c) (page 584);
- improperly delete or modify the use of an analogous diagram temperature in Tondre;
- improperly delete or modify the measurements in Rouse that are all made at a fixed temperature, wherein temperature is not a considered variable;

- improperly delete or modify the Rouse use of (concentration as a variable with) an arbitrarily chosen critical transmittance value;
- improperly delete or modify the manually produced diagrams in Rouse (and not produced by a computer in Rouse); and
- improperly ignore the teaching in Tondre et al. that criticizes a fixed temperature method, such as the one used in Rouse.

Such improper modifications/deletions would not be conducted by one of ordinary skill in the art in an effort to achieve the present invention, especially in view of how the cited combination still fails to disclose or recognize the electronic storage of the measuring points and the coordination and visualization of the electronically stored measuring points in a three-dimensional diagram with temperature and concentration as independent variables, as instantly claimed.

Applicant further submits that the claimed combination cannot change the principle of operation of the primary reference or render the reference inoperable for its intended purpose. *See M.P.E.P. §§ 2143.01, 2145(III).* In this regard, the asserted combination of Tondre and Rouse does just that - - changes the principle of operation of, or renders the Tondre and/or Rouse as inoperable for their intended purposes. Applicant also notes, and as mentioned, that Tondre was aware of possible titration techniques but remarks on page 582 (see last sentence) that a simple titration performed at a fixed temperature (such as the one disclosed in Rouse) is inferior to the procedure used by Tondre et al. Thus, Applicant submits that one of skill in the art would

lack the requisite motivation to achieve or make the present invention due to such differences between the references. *In re Vaeck; McGinley; Gordon.*

Accordingly, Applicant respectfully submits that a *prima facie* case of obviousness has not been established. Reconsideration and withdrawal of this rejection are respectfully requested.

Conclusion

A full and complete response has been made to all issues as cited in the Office Action. Applicant has taken substantial steps in efforts to advance prosecution of the present application. Applicant appreciates the indicated allowable subject matter (paragraph 6 of the Office Action). However, Applicant respectfully request reconsideration of the claims as presented herein and further respectfully requests that a timely Notice of Allowance issue for the present case.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Eugene T. Perez (Reg. No. 48,501) at the telephone number of the undersigned below.

An Interview is further requested if there remains any outstanding issues.

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Art Unit 1743
Reply to Office Action of April 15, 2005

Docket No.: 2964-0102P

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

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